

25. A method for selecting one or more genetically transformed cells from a population of cells, wherein the population of cells comprising genetically transformed cells comprising a first expressible nucleotide sequence encoding a first expression product, and non-transformed cells wherein the genetically transformed cells are capable of detoxifying a component by action of the first expressible nucleotide sequence or the first expression product; the method comprising:

introducing a medium to the population of cells, the medium comprising a first component or a precursor thereof in an amount that is detoxifiable by the transformed cells but toxic to the non-transformed cells; wherein the first expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and the first component is galactose, a precursor of galactose, or a combination thereof.

a 26. The method according to claim 25 wherein the genetically transformed cells further comprise a second expressible nucleotide sequence encoding a second expression product wherein the medium comprises a second component or a precursor thereof that is detoxifiable by the genetically transformed cells by the action of the second expressible nucleotide sequence or the second expression product; wherein the second expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose and the second component is galactose, a precursor of galactose, or a combination thereof.

27. The method according to claim 26 wherein the genetically transformed cell further comprises a third expressible nucleotide sequence encoding a third expression product wherein the medium comprises a third component or a precursor thereof that is detoxifiable by the genetically transformed cells by the action of the third expressible nucleotide sequence or the third expression product; wherein the third expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose and the third component is galactose, a precursor of galactose, or a combination thereof.

28. The method according to claim 25 wherein the step of introducing a medium comprising a component to the population of cells comprises introducing a medium comprising a precursor of the component wherein the component is prepared *in situ* from the precursor in the medium.

29. The method according to claim 25 wherein the genetically transformed cells are *in vitro* within a culture.

30. The method according to claim 25 wherein the genetically transformed cells are *in vivo* within an organism.

31. The invention according claim 25 wherein the genetically transformed cells are plant cells.

32. The invention according claim 25 wherein the genetically transformed cells further comprise a nucleotide sequence encoding a nucleotide sequence of interest.

33. A composition comprising a population of cells, the composition comprising:
genetically transformed cells and non-transformed cells wherein the genetically transformed cells comprise a first expressable nucleotide sequence encoding a first expression product; and

a medium comprising a first component or a precursor thereof in an amount that is detoxifiable by the genetically transformed cells by action of the first expressable nucleotide sequence or the first expression product but in an amount that is toxic to the non-transformed cells;

wherein the first expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and wherein the first component is galactose, a derivative of galactose, a precursor of galactose, or a combination thereof.

34. The composition according to claim 33, wherein the genetically transformed cells further comprise a second expressable nucleotide sequence encoding a second expression product,

wherein the medium comprises a second component that is detoxifiable by the genetically transformed cells by action of the second expressible nucleotide sequence or the second expression product; wherein the second expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, a precursor of galactose, or combinations thereof and the second component is galactose, a derivative of galactose, a precursor of galactose, or a combination thereof.

35. The composition according to claim 34, wherein the genetically transformed cells further comprise a third expressible nucleotide sequence encoding a third expression product, wherein the medium comprises a third component that is detoxifiable by the genetically transformed cells by action of the third expressible nucleotide sequence or the third expression product; wherein the third expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, a precursor of galactose, or combinations thereof and the third component is galactose, a derivative of galactose, a precursor of galactose, or a combination thereof.

36. The composition according to claim 33 wherein the medium comprises a precursor of the component and the component is prepared *in situ* from the precursor to provide the component in an amount that is detoxifiable by the transformed cells but toxic to the non-transformed cells.

37. The composition according claim 33 wherein the genetically transformed cells further comprise a nucleotide sequence encoding a nucleotide sequence of interest.

38. The composition according to claim 33 wherein the genetically transformed cells are *in vitro*.

39. The composition according to claim 33 wherein the genetically transformed cells are *in vivo*.

40. The composition according to claim 33 wherein the genetically transformed cells are plant cells.

41. A population of cells comprising genetically transformed cells and non-transformed cells; wherein the genetically transformed cells comprise a first expressable nucleotide sequence encoding a first expression product and are capable of detoxifying a first component by action of the first expressable nucleotide sequence or the first expression product; wherein the first expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and wherein the first component is galactose or a precursor thereof.

a 42. The population of cells according to claim 41 wherein the genetically transformed cells further comprise a second expressable nucleotide sequence encoding a second expression product and are capable of detoxifying a second component by action of the second expressable nucleotide sequence or the second expression product; wherein the second expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and wherein the second component is galactose or a precursor thereof.

43. The population of cells according to claim 42 wherein the genetically transformed cells further comprise a third expressable nucleotide sequence encoding a third expression product and are capable of detoxifying a third component by action of the third expressable nucleotide sequence or the third expression product; wherein the third expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and wherein the third component is galactose or a precursor thereof.

44. The population of cells according to claim 41 wherein the genetically transformed cells are *in vitro*.

45. The population of cells according to claim 41 wherein the genetically transformed cells are *in vivo*.

46. The population of cells according to claim 41 wherein the genetically transformed cells are plant cells.

47. A genetically transformed cell comprising a first expressible nucleotide sequence encoding a first expression product; wherein the genetically transformed cell is capable of detoxifying a first component by action of the first expressible nucleotide sequence or the first expression product; wherein the first expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose and the first component or precursor thereof is galactose or a precursor thereof.

a 48. The genetically transformed cell according to claim 47, further comprising a second expressible nucleotide sequence encoding a second expression product wherein the genetically transformed cell is capable of detoxifying a second component by action of the second expressible nucleotide sequence or the second expression product; wherein the second expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and wherein the second component is galactose or a precursor thereof.

49. The genetically transformed cell according to claim 48, further comprising a third expressible nucleotide sequence encoding a third expression product wherein the genetically transformed cell is capable of detoxifying a third component by action of the third expressible nucleotide sequence or the third expression product; wherein the third expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose; and wherein the third component is galactose or a precursor thereof.

50. The genetically transformed cell according to claim 47, wherein the cell is a plant cell.

51. A non-human organism comprising a genetically transformed cell according to claim 47.

52. A plant comprising a genetically transformed cell according to claim 47.

53. The plant according to claim 52, wherein the plant is capable of providing a feed or foodstuff to humans or animals.

54. A plant according to claim 52 wherein the plant is rape seed, potato or maize.
55. A construct for transforming a cell, the construct comprising: a first expressable nucleotide sequence encoding a first expression product, wherein the first expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose.
56. The construct according to claim 55, further comprising a second expressable nucleotide sequence encoding a second expression product, wherein the second expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose.
57. The construct according to claim 56, further comprising a third expressable nucleotide sequence encoding a third expression product, wherein the third expression product is an enzyme capable of metabolizing galactose, a derivative of galactose, or a precursor of galactose.
58. The construct according to claim 55, wherein the cell is a plant cell.
59. A kit for transforming a cell, the kit comprising a construct according to claim 55 and a medium.
60. The kit according to claim 59, wherein the medium comprises a component that is detoxifiable by a transformed cell.
61. A vector comprising the construct according to claim 55.
62. A kit for transforming a cell, the kit comprising a vector according to claim 61, and a medium.

63. The kit according to claim 62, wherein the medium comprises a component that is detoxifiable by a transformed cell.

64. A plasmid comprising the construct according to claim 55.

65. A kit for transforming a cell, the kit comprising a plasmid according to claim 64; and a medium.

66. The kit according to claim 65, wherein the medium comprises a component that is detoxifiable by a transformed cell.

67. A plant comprising one or more heterologous enzymes, wherein the heterologous enzymes are selected from the group consisting of galactokinase (EC 2.7.1.6), UTP-dependent pyrophosphorylase (EC 2.7.7.10) and UDP-glucose-dependent uridylyltransferase (EC 2.7.7.12).

68. The method according to claim 25, wherein the first expression product is galactokinase (EC 2.7.1.6), UTP-dependent pyrophosphorylase (EC 2.7.7.10), UDP-glucose-dependent uridylyltransferase (EC 2.7.7.12), or UDP-galactose epimerase (EC 5.1.3.2).

69. The method according to claim 25, wherein the genetically transformed cell comprises a prokaryotic cell comprising a nucleotide sequence encoding galactokinase (EC 2.7.1.6), UTP-dependent pyrophosphorylase (EC 2.7.7.10), UDP-glucose-dependent uridylyltransferase (EC 2.7.7.12) or UDP-galactose epimerase (EC 5.1.3.2); wherein the nucleotide sequence comprises at least one intron which inactivates the nucleotide sequence or the expression product thereof in the prokaryote.

71. A method for selecting one or more genetically transformed cells from a population of cells; the method comprising: